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09/461,984	12/15/1999	JIN LU	PHA-23-890	4517

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EXAMINER

HOFFMAN, BRANDON S

ART UNIT	PAPER NUMBER
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2136

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/461,984

Applicant(s)

LU ET AL.

Examiner

Brandon Hoffman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) Z.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Claims 1-17 are pending in this office action, claims 1 and 17 are newly amended to fix examiners objections.

2. Applicant's arguments, see page 10, second paragraph, filed November 14, 2003, with respect to the rejection(s) of claim(s) 1-17 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Eskicioglu in view of ITU-T, further in view of BLAH and also Spies et al. in view of ITU-T, further in view of BLAH.

Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1, 2, and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eskicioglu et al. (WO 98/56179 A1) in view of International Telecommunication Union, hereinafter referred to as ITU-T, and further in view of Okuyama et al. (U.S. Patent No. 5,987,126).

Regarding claim 1, Eskicioglu et al. teaches a system for copy protecting information (fig. 1), the system comprising:

- A point of deployment module (fig. 1, ref. num 30); and
- A set-top box including (fig. 1, ref. num 20);
- Wherein the set-top box transmits a request message for information (pg. 8, lines 20-21),
- The point of deployment module generates a reply message (pg. 8, lines 24-26),
- Respectively generating a first key in the point of deployment module and a second key in the set-top box (pg. 8, lines 28-29 and pg. 9, lines 20-21),
- And the point of deployment module encrypting the information with the first shared key and transmitting the encrypted information to the set-top box (pg. 8, lines 27-28),
- And the set-top box decrypting the encrypted information with the second shared key when the first and second shared keys match (pg. 9, lines 17-20).

Eskicioglu et al. does not teach:

- The reply message including at least one control information pair,
 - Each pair having copy control information
 - And a stream identifier.

ITU-T teaches:

- The reply message including at least one control information pair, the control information pair including a stream identifier (figure F.7).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the system of Eskicioglu et al. It would have been obvious to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the method of Eskicioglu et al. because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

The combination of Eskicioglu et al./ITU-T still does not teach each pair having copy control information.

Okuyama et al. teaches each pair having copy control information (col. 18, lines 10-15).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control information pair, each pair having CCI, as taught by Okuyama et al., with the system of Eskicioglu et al./ITU-T. It would have been obvious to reply using a message that includes at least one control information pair, each pair having CCI, as taught by

Okuyama et al., with the method of Eskicioglu et al./ITU-T because copy control information signifies to the method which level of copy protection to maintain.

Regarding claim 2, Eskicioglu et al. teaches a method of copy protecting information transmitted between a deployment module and a host device (fig. 1), the method comprising the steps of:

- Transmitting a request message for the information from the host device to the deployment module (pg. 8, lines 20-21);
- Transmitting a reply message from the deployment module to the host device (pg. 8, lines 24-26),
- Generating a first shared key at the host and a second shared key at the deployment module, respectively (pg. 8, lines 28-29 and pg. 9, lines 20-21);
- Encrypting, in the deployment module, the information (pg. 8, lines 27-28);
- Transmitting the encrypted information from the deployment module to the host (pg. 8, lines 26-29);
- Decrypting, at the host, the encrypted information (pg. 9, lines 17-20); and
- Receiving the information at the host when the first and second shared keys match (pg. 11, lines 15-24).

Eskicioglu et al. does not teach:

- The reply message including at least one control information pair,
 - Each pair having copy control information
 - And a stream identifier.

ITU-T teaches:

- The reply message including at least one control information pair, the control information pair including a stream identifier (figure F.7).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the method of Eskicioglu et al. It would have been obvious to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the method of Eskicioglu et al. because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

The combination of Eskicioglu et al./ITU-T still does not teach each pair having copy control information.

Okuyama et al. teaches each pair having copy control information (col. 18, lines 10-15).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control

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information pair, each pair having CCI, as taught by Okuyama et al., with the system of Eskicioglu et al./ITU-T. It would have been obvious to reply using a message that includes at least one control information pair, each pair having CCI, as taught by Okuyama et al., with the method of Eskicioglu et al./ITU-T because copy control information signifies to the method which level of copy protection to maintain.

Regarding claim 4, Eskicioglu et al. as modified by ITU-T/Okuyama et al. teaches wherein the host is a set-top box (see fig. 1, ref. num 20 of Eskicioglu et al.).

Regarding claim 5, Eskicioglu et al. as modified by ITU-T/Okuyama et al. teaches wherein the encryption means includes a hash function (see pg. 11, lines 9-13 of Eskicioglu et al.).

Regarding claim 6, Eskicioglu et al. as modified by ITU-T/Okuyama et al. teaches wherein the encrypted information in an elementary stream of information is encrypted with the first shared key (see pg. 9, lines 17-24 of Eskicioglu et al.).

Regarding claim 7, Eskicioglu et al. as modified by ITU-T/Okuyama et al. teaches wherein the stream identifier that is transmitted to the host is incorporated with the Packetized Elementary Stream (PES) header of the elementary stream (see section 2.1.20, 2.1.36, 2.1.37, and 2.1.38 of ITU-T).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eskicioglu et al. (WO 98/56179 A1) in view of International Telecommunication Union, hereinafter referred to as ITU-T, and Okuyama et al. (U.S. Patent No. 5,987,126), and further in view of Communications Engineering & Design, hereinafter referred to as CED (<http://www.cedmagazine.com/ced/9811/9811a.htm>)

Regarding claim 3, Eskicioglu et al. as modified by ITU-T and Okuyama et al. teaches all the limitations of claim 2. However, the combination of Eskicioglu et al./ITU-T/Okuyama et al. do not teach wherein the deployment module is a point of deployment module.

CED teaches wherein the deployment module is a point of deployment module (pg. 3, paragraph 3).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use a POD module, as taught by CED, with the system of Eskicioglu et al./ITU-T/Okuyama et al. It would have been obvious to use a POD module, as taught by CED, with the method of Eskicioglu et al./ITU-T/Okuyama et al. because a point of deployment module is a small secure device that can easily be changed to update security features instead of replacing the whole set-top box.

Claims 8-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spies et al. (U.S. Patent No. 6,055,314) in view of ITU-T, and further in view of Okuyama et al. (U.S. Patent No. 5,987,126).

Regarding claim 8, Spies et al. teaches a deployment module for use with a host device (fig. 6), the deployment module comprising:

- Mean for communicating with the host device (fig. 6, ref. 'Serial I/O'); and
- A processor for (fig. 6, ref. num 100),
 - In response to a request message for information from the host device, generating a reply message to the host device (col. 13, lines 31-34),
- Generating a first shared key using the at least one control information pair (fig. 6, ref. num 118),
- Encrypting the information with the first shared key and transmitting the encrypted information to the host device (fig. 6, ref. num 114).

Spies et al. does not teach:

- The reply message including at least one control information pair,
 - Each pair having copy control information
 - And a stream identifier.

ITU-T teaches:

- The reply message including at least one control information pair, the control information pair including a stream identifier (figure F.7).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the deployment module of Spies et al. It would have been obvious to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the deployment module of Spies et al. because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

The combination of Eskicioglu et al./ITU-T still does not teach each pair having copy control information.

Okuyama et al. teaches each pair having copy control information (col. 18, lines 10-15).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control information pair, each pair having CCI, as taught by Okuyama et al., with the system of Eskicioglu et al./ITU-T. It would have been obvious to reply using a message that includes at least one control information pair, each pair having CCI, as taught by

Okuyama et al., with the method of Eskicioglu et al./ITU-T because copy control information signifies to the method which level of copy protection to maintain.

Regarding claims 9 and 14, Spies et al. as modified by ITU-T/Okuyama et al. teaches wherein the deployment module is selected from the group consisting of a point of deployment module, wireless data interface appliance, smartcard, personal computer, or Internet interface appliance (see col. 5, lines 62-64 of Spies et al.).

Regarding claims 10 and 15, Spies et al. as modified by ITU-T/Okuyama et al. teaches wherein the host is a set-top box (see col. 6, lines 41-45 of Spies et al.).

Regarding claims 11 and 16, Spies et al. as modified by ITU-T/Okuyama et al. teaches wherein the encrypted information is transmitted to the host device using a transport stream, wherein the transport stream includes at least one elementary stream (see section 2.4.1 of ITU-T). A transport stream is used to send, or transport, data from one place to another, particularly through noisy channels (see 3rd paragraph above Intro. 1 of ITU-T).

Regarding claims 12 and 17, Spies et al. as modified by ITU-T/Okuyama et al. teaches wherein respective ones of the at least one control information pairs is associated with respective ones of the at least one elementary streams (see x of person). An elementary stream (e.g., video, sound, or data) is associated with control

information pairs (e.g., CCI and a stream identifier), respectively, because each elementary stream requires a stream identifier (see figure F.7 of ITU-T).

Regarding claim 13, Spies et al. teaches a host device for use with a deployment module (fig. 7), the host device comprising:

- Means for communicating with the deployment module (fig. 7, ref. num 160); and
- A processor for (fig. 7, ref. num 150),
 - Generating a request message for information to the deployment module (col. 13, lines 31-34), and in response, receiving a reply message from the deployment module,
- Generating a second shared key using the at least one control information pair (fig. 8, ref. num 170),
- Decrypting encrypted information, received from the deployment module, with the second shared key (fig. 7, ref. num 162), and
- Receiving the information when the second shared key matches a first shared key generated in the deployment module (fig. 7, ref. num 164).

Spies et al. does not teach:

- The reply message including at least one control information pair,
 - Each pair having copy control information
 - And a stream identifier.

ITU-T teaches:

- The reply message including at least one control information pair, the control information pair including a stream identifier (figure F.7).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the host device of Spies et al. It would have been obvious to reply using a message that includes at least one control information pair, each pair having a stream identifier, as taught by ITU-T, with the host device of Spies et al. because the reply message including at least one control information pair, relating to the information, each control information pair having a stream identifier would identify the elementary stream, e.g., data files.

The combination of Eskicioglu et al./ITU-T still does not teach each pair having copy control information.

Okuyama et al. teaches each pair having copy control information (col. 18, lines 10-15).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to reply using a message that includes at least one control information pair, each pair having CCI, as taught by Okuyama et al., with the system of

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Eskicioglu et al./ITU-T. It would have been obvious to reply using a message that includes at least one control information pair, each pair having CCI, as taught by Okuyama et al., with the method of Eskicioglu et al./ITU-T because copy control information signifies to the method which level of copy protection to maintain.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 703-305-4662. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Brandon Hoffman

BH
December 29, 2003

Emmanuel L. Moise
EMMANUEL L. MOISE
PRIMARY EXAMINER